

Claims

What is claimed is:

1. A method of communicating between programs having different machine context organizations, said method comprising:

4 determining, at compile time, which savearea layout of a plurality of savearea layouts is to be used 5 to save information relating to a calling program; and

7 selecting, at compile time, a linkage service from 8 a plurality of linkage services to be used in 9 communicating between said calling program and a callee 10 program, wherein said calling program and said callee 11 program have different machine context organizations.

1. 2. The method of claim 1, wherein said determining is based upon one or more attributes of said callee program.

1 3. The method of claim 2, wherein one attribute of 2 said one or more attributes comprises a size of one or more 3 registers to be used by said callee program.

1 4. The method of claim 2, wherein said determining is 2 further based on a target architecture mode.

1 5. The method of claim 1, wherein said selecting is 2 based upon the determined savearea layout.

1 6. The method of claim 1, wherein said linkage service
2 comprises at least one of a calling service and a returning
3 service.

1 7. The method of claim 1, wherein at least two
2 savearea layouts of said plurality of savearea layouts
3 coexist within a single executable module.

1 8. The method of claim 1, wherein said determining and
2 said selecting enable use of a source code that has at least
3 one of the following: a reduced amount of dual path source
4 code, natural parameter passing to/from a variety of caller
5 types, and natural exploitation of a large architecture,
6 where desired.

1 9. The method of claim 8, wherein said source code
2 comprises at least one common name usable in referencing one
3 or more analogous fields in at least two savearea layouts of
4 said plurality of savearea layouts to reduce dual path
5 source code.

1 10. The method of claim 1, wherein said different
2 machine context organizations comprise different register
3 sizes.

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11. A system of communicating between programs having
different machine context organizations, said system
comprising:

means for determining, at compile time, which
savearea layout of a plurality of savearea layouts is
to be used to save information relating to a calling
program; and

means for selecting, at compile time, a linkage
service from a plurality of linkage services to be used
in communicating between said calling program and a
callee program, wherein said calling program and said
callee program have different machine context
organizations.

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12. The system of claim 11, wherein said means for
determining comprises using one or more attributes of said
callee program.

13. The system of claim 12, wherein one attribute of
said one or more attributes comprises a size of one or more
registers to be used by said callee program.

14. The system of claim 12, wherein the determining is
based on a target architecture mode.

15. The system of claim 11, wherein said means for
selecting comprises using the determined savearea layout in
making the determination.

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1 16. The system of claim 11, wherein said linkage
2 service comprises at least one of a calling service and a
3 returning service.

1 17. The system of claim 11, wherein at least two
2 savearea layouts of said plurality of savearea layouts
3 coexist within a single executable module.

1 18. The system of claim 11, wherein said means for
2 determining and said means for selecting enable use of a
3 source code that has at least one of the following: a
4 reduced amount of dual path source code, natural parameter
5 passing to/from a variety of caller types, and natural
6 exploitation of a large architecture, where desired.

1 19. The system of claim 18, wherein said source code
2 comprises at least one common name usable in referencing one
3 or more analogous fields in at least two savearea layouts of
4 said plurality of savearea layouts to reduce dual path
5 source code.

1 20. The system of claim 11, wherein said different
2 machine context organizations comprise different register
3 sizes.

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21. A system of communicating between programs having
2 different machine context organizations, said system
3 comprising:

4 a computing environment adapted to determine, at
5 compile time, which savearea layout of a plurality of
6 savearea layouts is to be used to save information
7 relating to a calling program; and

8 said computing environment being further adapted
9 to select, at compile time, a linkage service from a
10 plurality of linkage services to be used in
11 communicating between said calling program and a callee
12 program, wherein said calling program and said callee
13 program have different machine context organizations.

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DETAILED DESCRIPTION

1 22. At least one program storage device readable by a
2 machine, tangibly embodying at least one program of
3 instructions executable by the machine to perform a method
4 of communicating between programs having different machine
5 context organizations, said method comprising:

6 determining, at compile time, which savearea
7 layout of a plurality of savearea layouts is to be used
8 to save information relating to a calling program; and

9 selecting, at compile time, a linkage service from
10 a plurality of linkage services to be used in
11 communicating between said calling program and a callee
12 program, wherein said calling program and said callee
13 program have different machine context organizations.

1 23. The at least one program storage device of claim
2 22, wherein said determining is based upon one or more
3 attributes of said callee program.

1 24. The at least one program storage device of claim
2 23, wherein one attribute of said one or more attributes
3 comprises a size of one or more registers to be used by said
4 callee program.

1 25. The at least one program storage device of claim
2 23, wherein said determining is further based on a target
3 architecture mode.

1 26. The at least one program storage device of claim
2 22, wherein said selecting is based upon the determined
3 savearea layout.

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1 27. The at least one program storage device of claim
2 22, wherein said linkage service comprises at least one of a
3 calling service and a returning service.

1 28. The at least one program storage device of claim
2 22, wherein at least two savearea layouts of said plurality
3 of savearea layouts coexist within a single executable
4 module.

1 29. The at least one program storage device of claim
2 22, wherein said determining and said selecting enable use
3 of a source code that has at least one of the following: a
4 reduced amount of dual path source code, natural parameter
5 passing to/from a variety of caller types, and natural
6 exploitation of a large architecture, where desired.

1 30. The at least one program storage device of claim
2 29, wherein said source code comprises at least one common
3 name usable in referencing one or more analogous fields in
4 at least two savearea layouts of said plurality of savearea
5 layouts to reduce dual path source code.

1 31. The at least one program storage device of claim
2 22, wherein said different machine context organizations
3 comprise different register sizes.

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